GIS Trends

Emerging or Mature Technology?

Presented by:

Doug Morrison

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Background

- B.S. Geography/Biology NWMSU
  - First class of GIS graduates
- 15 years in the GIS Field
  - GIS Technician, DBA, Software Developer
  - Manage GIS team of 25 individuals

GIS has "Grown Up"

- 1980's Early Infancy
  - Early tools such as ESRI's ArcInfo
  - User interfaces were difficult
  - CAD vs. Mapping
  - Expensive
  - Required investment in hardware
  - Highly specialized users
    - High-level of training investment

GIS has "Grown Up"

- 1990's Decade of Processing
  - Personal Computer Breakthrough
  - User interfaces were point and click
  - Software stabilized with specialized functionality
  - Software became competitive
  - Hardware capacity/power was affordable
  - Data conversion and processing into GIS layers and datasets was prominent

GIS has "Grown Up"

- 2000 Decade of Modeling
  - Software & Hardware are robust
  - Expanse amounts of data available
  - Real-time networks (network modeling) for water, storm, electric, roads and weather
  - Analysis of data through 3-D modeling and animation
  - Data Collection is accurate (LIDAR, Sonar, Handheld GPS)

Today's Trends

- Enterprise GIS
- Mobile GIS
- GIS Data
  - Collection
  - Dissemination
  - Usability
- GIS Applications
- GIS Software Development
- GIS Data Hosting

Enterprise GIS

- Central Repository for Data
  - Collaboration amongst departments
  - Eliminates duplication of data
  - Data is updated centrally
  - Users make decisions on the same data
- System Maintenance is simplified
  - Single environment to be maintained
  - Updates/Upgrades affect all users system-wide

Mobile GIS

- Survey Grade
- Mapping Grade
  - Handheld, Tablets, GPS Cards
  - GIS Interaction capabilities
    - Real-time interactive
    - Disconnected
- Recreational Grade
  - GIS Uses

GIS Data

- Collection
  - Field Collection/Verification
  - Web Sources
  - Collaboration amongst agencies
- Dissemination
  - Private or Public consumption
  - Public demand for data
- Usability
  - Data is information knowledge

GIS Applications

- ESRI Applications
  - ArcReader, ArcView, ArcEditor, ArcInfo
  - ArcSDE
  - ArcIMS
  - ArcServer
- Bentley Applications
  - GeoGraphics
- MapInfo
- Smallworld
- Intergraph

GIS Software Development

- Object-oriented programming
- Typical languages include
  - Visual Basic/VBA
  - Active Server Pages (ASP), HTML
  - .Net Languages
  - eXtended Markup Language (XML)

GIS Data Hosting

- Browser-based applications
- Centralized Data Warehouses
- Secured environment for users
  - Similar to a desktop environment
- Allows public access to data
  - Easy dissemination of data
- Affordable solution for enterprises with limited IT resources


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Questions?

Contacts

Jason Fetch
Bartlett & West
3456 E. Century Ave.
Bismarck, ND 58503

Phone: 701-258-1110
Jason.fetch@bartwest.com

Doug Morrison
Bartlett & West
1200 SW Executive DR
Topeka, KS 66615

Phone: 785-228-3239
Doug.morrison@bartwest.com